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POLYCLADS OF THE EAST COAST OF NORTH AMERICA [1]

By A. S. Pearse

Between June 1935 and May 1936, while I was investigating the flatworms known to the oystermen of Florida as "leeches," a number of species of these polyclads were found along the shores of the Gulf of Mexico. In attempting to identify these specimens, I examined turbellarians in the United States National Museum, and the present paper is the result. Twenty-seven species of the order Polycladida are now known from the east coast of North America from Texas to Baffin Bay. Eleven species and three genera are here described as new.

Grateful acknowledgments are made to George W. Wharton, who prepared serial sections and made valuable suggestions; to Miss Eliza Taylor, for serial sections of *Eustylochus;* and to Prof. Horace W. Stunkard, who read the manuscript of this paper critically and suggested several improvements.

Order POLYCLADIDA

Suborder ACOTYLINA: Section CRASPEDOMMATA

Family DISCOCELIDAE

Genus DISCOCELIS Ehrenberg

DISCOCELIS GRISEA, new species

FIGURE 22

A dozen specimens were collected from the Gulf of Mexico on November 21, 1935, and one on February 10, 1936. When alive, an

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individual of this species looked somewhat like *Stylochus inimicus* Palombi but was easily distinguished by the quicker movements and the fact that when crawling the anterior end was wider than the posterior, so that the shape of the body was oval. The largest individual was 18 mm long and 5 mm wide when extended. The color of the

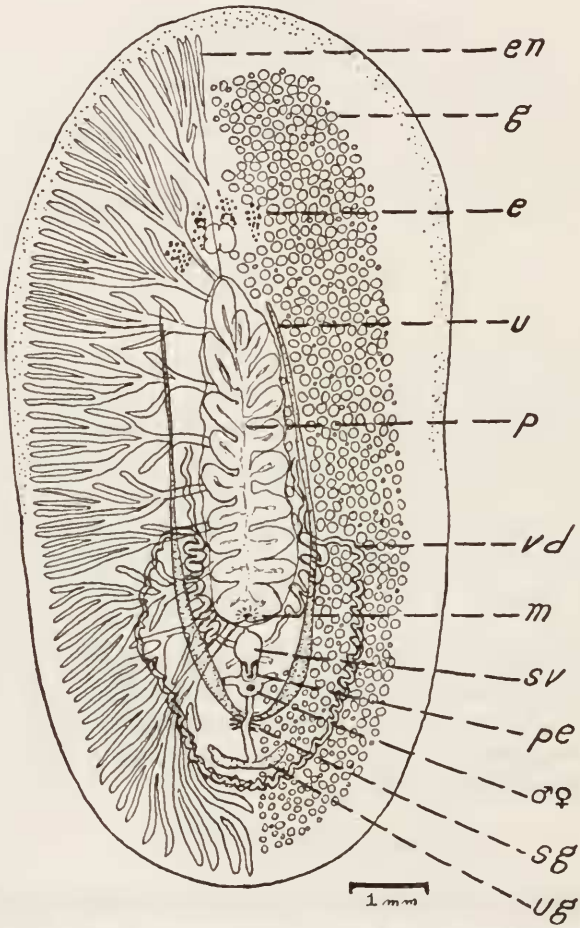

FIGURE 22.—*Discocelis grisea*, new species: Enteron at left, gonads at right. *e*, Eyes; *en*, enteron; *g*, gonads; *m*, mouth; *p*, pharynx; *pe*, penis; *sg*, shell gland; *sv*, seminal vesicle; *u*, uterus; *ug*, uterine glands; *vd*, vas deferens; ♂, male opening; ♀, female opening.

dorsum was gray, with faint radiating light streaks (nerves) and a light median band (pharynx, etc.) through the middle half. The ventrum was cream-color, with white genitalia showing through. At times the worms swam about by waving the sides of the body. There were no nuchal tentacles, but the tentacular eyes were in low tubercles.

Preserved, stained, and mounted, the type measures 11.6 mm long and 5.8 mm wide. The structures in the median line are the following distances from the anterior end: Brain, 2.7 mm; pharynx, 3.5–8.2 mm; mouth, 8.0 mm; male genital bursa, 8.2–8.8 mm; genital opening, 8.9 mm; shell gland, 9.4 mm; accessory uterine organs, 9.9 mm; posterior loop of vasa deferentia, 10.2 mm. The cerebral and tentacular eyes are arranged in two pairs of lateral groups, about 15 in each; about 350 marginal eyes extend along the sides from the anterior end about halfway to the posterior end.

The pharynx is folded into about 10 lobes and is rather narrow; 1.0 by 5.1 mm. Ten pairs of branched, lobate caeca arise from the median stem of the enteron dorsal to the pharynx and extend to the margins of the body. The mouth is ventral, just anterior to the posterior border of the pharynx.

Close behind the mouth the prostate gland and penis are enclosed in a pyriform sheath with two to four lateral appendages. The coiled vasa deferentia extend forward from the prostate gland close beside the pharynx. At about the posterior third of the pharynx each gives off a lateral branch, which coils posteriorly and fuses with the one from the opposite side behind the accessory uterine organs. The vagina, behind the single genital pore, is surrounded by shell-gland follicles. Two lateral, longitudinal uteri extend forward from the shell gland along the sides of the pharynx. None of those available contain eggs, and all taper gradually toward the anterior. Behind the shell gland a slightly sinuous median duct connects with a pair of transverse accessory uterine organs, which are usually curved anteriorly near their distal ends. Numerous ovaries and testes are distributed in a ring around the pharynx and genital ducts, leaving a zone about 0.7 mm wide free about the margin.

Type.—U. S. N. M. no. 20186, from Crooked Island Sound, Farmdale, Fla.; collected November 21, 1935, by A. S. Pearse.

Remarks.—This species differs from *Discocelis mutabilis* Verrill, 1873, in having the cerebral and tentacular eyes arranged in two pairs of groups and in being colored with radiating light streaks and a lighter median band.

Family STYLOCHIDAE

Genus STYLOCHUS Ehrenberg

STYLOCHUS INIMICUS Palombi

FIGURE 23

Stylochus inimicus PALOMBI, 1931, p. 219.

As Palombi has given a complete description of this species and as I have published (1938) a paper on the general ecology of this

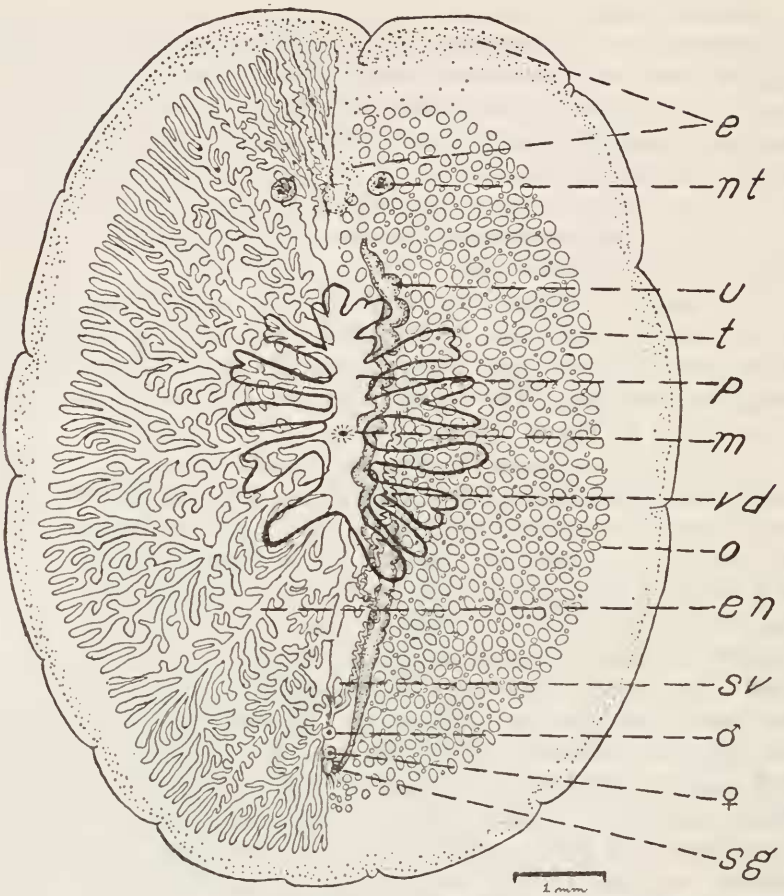

FIGURE 23.—*Stylochus inimicus* Palombi. *e*, Eyes; *en*, enteron; *m*, mouth; *nt*, nuchal tentacles; *o*, ovary; *p*, pharynx; *sg*, shell gland; *sv*, seminal vesicle; *t*, testis; *u*, uterus; *vd*, vas deferens; ♂, male opening; ♀, female opening.

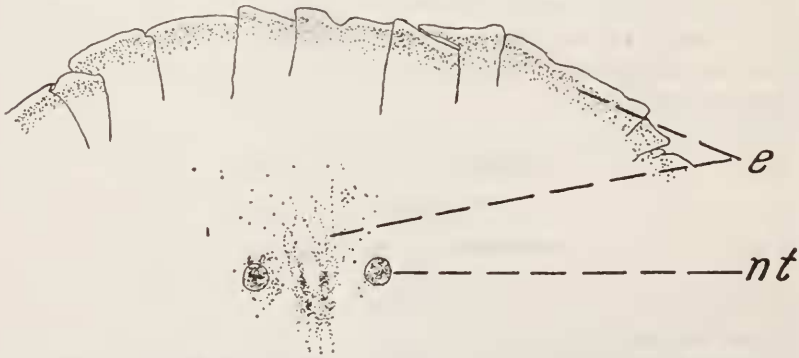

FIGURE 24.—*Stylochus floridanus*, new species: Anterior end showing eyes (*e*) and tentacles (*nt*).

polyclad and its relations as an oyster pest, it is discussed here but briefly. It is common on oyster beds, especially in summer and during dry periods when estuarine salinities are high, from Apalachicola Bay along the coast of Florida to Indian River. Palombi (1936) has described *S. tenax* from Apalachicola Bay. After examining specimens from the same locality and comparing them with others from the localities from which he describes *S. inimicus*, I am convinced that all belong to one species. The characters that Palombi cites as different are variable. Perhaps this may be explained by the fact that he studied two lots of worms; one was preserved in alcohol, the other in formol.

STYLOCHUS FLORIDANUS, new species

FIGURE 24

Body of largest specimen observed alive, expanded and actively creeping; length, 53 mm; width, 27 mm. Five preserved specimens measure: 31 by 24.5, 30 by 22, 29 by 21, 23 by 22, 20.5 by 13.5 mm. The margins of the body are always more or less thrown into small folds. The nuchal tentacles are 0.7 mm long when extended. They average about a fifth of the length of the body from the anterior end. They are conical, and each tapers to a rather sharp tip. The enteron has a median stem and branching lateral caeca, which extend to near the margins of the body; the mouth is on the median line about two-fifths of the length of the body from the anterior end; the pharynx is thrown into about 10 pairs of lateral folds. There are groups of from 40-odd to more than 100 eyes in and about the base of each nuchal tentacle. A more or less circular group of about 160 eyes surrounds the brain and leaves a clear space in the middle. Peripheral to this group, eyes are scattered, and these decrease in number centrifugally. Many marginal eyes extend completely around the body. These are more numerous and somewhat larger toward the anterior end and are least numerous at about the junction of the middle and posterior thirds.

The male genital opening is about 0.5 mm in front of the female opening. Both are on the median line about one-seventh of the length of the body from the posterior end. Anterior to the male opening there is a short conical penis and a pyriform prostate gland. The vasa deferentia coil along the lateral margins of the pharynx, unite posterior to it, and enter the penis through a sinuous tube. The gonads and uteri do not show well in any of the specimens available. Behind the female opening there is a small globular vesicle.

The color of living specimens is pink. The dorsum is covered with small pink spots, which measure 0.1 by 0.1 mm to 0.1 by 0.6 mm

and show a tendency to be more elongated toward the margins. These are surrounded by a cream-colored background. The body appears slightly darker over the pharynx and median portion of the gut. There are no spots over the brain. The ventrum is creamy, with a slightly reddish tint. The pharynx and vasa deferentia show as whitish areas.

Type.—U.S.N.M. no. 20187, from St. Vincent Bar, Apalachicola Bay, Fla.; collected June 12, 1935, by A. S. Pearse.

Remarks.—Seven specimens were collected on the oyster beds in Apalachicola Bay, June 7 to July 25, 1935. Five of these are deposited in the United States National Museum. This species was rather rare, for during the same period hundreds of specimens of *Stylochus inimicus* Palombi were found. In color it is somewhat like the species that Verrill (1873) described as "*Stylochus*" *littoralis*, but its tentacles are farther anterior, the size is larger, and the distribution of the eyes is different.

STYLOCHUS ZEBRA (Verrill)

Stylochopsis zebra VERRILL, 1882, p. 371.

Several specimens of this species were obtained from Woods Hole, Mass., and are now deposited in the United States National Museum.

Genus EUSTYLOCHUS Verrill

As Bock (1925), Bresslau (1933), and Meixner (1907) have pointed out, the Stylochidae consist of a heterogeneous collection of Craspedommata, a fact that makes the separation of various species into genera rather difficult. Notwithstanding the fact that these writers do not recognize Verrill's (1893) genus *Eustylochus*, it seems to me proper to do so. The Stylochidae on the east coast of North America appear to fall into two groups: (1) Those in the genus *Stylochus* have two genital pores, which are clearly separate and lie more than a seventh of the length of the body from the posterior end, and have marginal eyes around the whole body, weak dermal musculature, and ovaries ventral; (2) those in the genus *Eustylochus* have genital pores very close together and less than a twentieth of the length of the body from the posterior end, usually have marginal eyes only around the anterior half, heavy dermal musculature, and ovaries dorsal. George W. Wharton has bred out larvae from the eggs of *Stylochus inimicus* Palombi and *Eustylochus meridianalis*, new species. He finds that at the time of hatching the former bears no lobes and that the latter has lobes.

EUSTYLOCHUS ELLIPTICUS (Girard)

Planocera elliptica Girard, 1850, p. 251.

In the collection of the National Museum there are five specimens of this species collected on Cape Cod, Mass., in 1879 at low tide mark; and a specimen from Newport, R. I., August 20, 1880. Although these are in poor condition, they were stained, mounted, and used for comparison with specimens of the next two species.

EUSTYLOCHUS species ?

Two poorly preserved specimens in the National Museum collection, one (U.S.N.M. no. 15624) collected off Newport, R. I., September 2, 1880, the other (U.S.N.M. no. 14398) from Woods Hole, Mass., September 19, 1882, both determined by A. E. Verrill as *Planocera nebulosus* Girard, unquestionably belong to the genus *Eustylochus*. They have anterior marginal eyes and contiguous genital pores very close to the posterior end. These specimens probably should be identified with the preceding species, but until someone makes a careful study of the Eustylochi on the New England coast, their status, because of their poor state of preservation, must remain specifically uncertain. For that reason this questioned species has not been included in the key on p. 94.

EUSTYLOCHUS MERIDIANALIS, new species

Figure 25

Body elongate-elliptical; very flat; length of a specimen measured while crawling and extended on January 9, 1936, 24.0 mm; width, 11.00 mm; another slender individual measured 20 by 5 mm when crawling; sizes of large preserved specimens are given in the table below. Tentacles in living specimen, slender, conical; with eyes extending to distal sixth; 0.6 mm long; about a seventh of the length of the body from the anterior end. Mouth, ventral and about in the middle of the median line. Pharynx a little less than half as long as the body; with anterior, posterior, and about six lateral lobes. The enteron has a median stem and eight or more branched caeca on each side. Brain largely or wholly posterior to the bases of the tentacles. Eyes vary with age in number and arrangement. The marginal eyes are seldom distributed posteriorly beyond the anterior fifth or sixth of body, but in a few individuals they may be. One individual only 1.8 mm long, which perhaps belongs to this species, has eyes all around its body Seven large individuals show the following arrangement of eyes:

Locality	Body size, mm	Cerebral	Frontal	Tentacular	Marginal
Apalachicola, Fla	13.5 by 11.0	6	22	44	700
Do	14.5 by 11.3	6	8	52	448
Seabrook, Tex	11.0 by 11.0	54	30	150	820
Charlotte County, Fla	9.3 by 6.8	10	12	44	490
Do	9.3 by 7.2	50	44	44	860
Pamlico Sound, N. C	10.0 by 5.8	6	12	60	500
Tampa, Fla	4.7 by 3.0	6	4	22	290

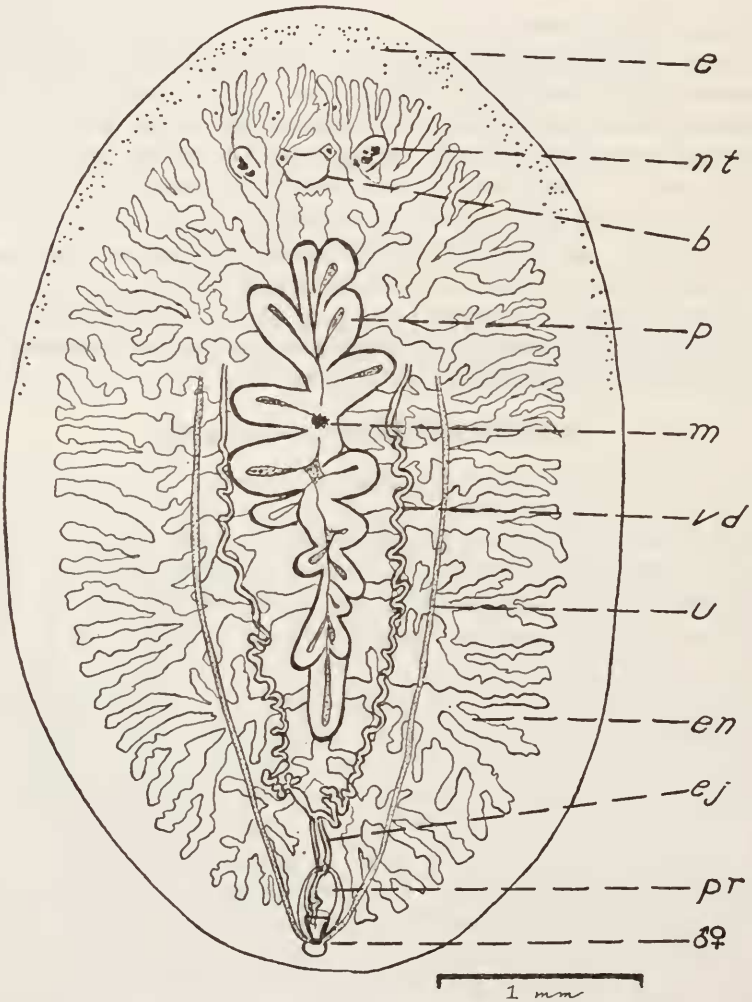

FIGURE 25.—*Eustylochus meridianalis*, new species. *b*, Brain; *e*, eyes; *ej*, ejaculatory duct; *en*, enteron; *m*, mouth; *nt*, nuchal tentacles; *p*, pharynx; *pr*, prostate gland; *u*, uterus; *vd*, vas deferens; ♂, male opening; ♀, female opening.

The genital pores are close together and near the posterior margin of the body, less than one-thirtieth of the length of the body from the posterior end. On each side of the body is a concentric area where numerous small testes occur. The coiled vasa deferentia pass posteriorly on either side of the pharynx. They unite to form a large, slightly coiled, pyriform seminal vesicle, which leads to the strong conical penis, adjacent to the genital pore. The prostate gland lies above the anterior half of the duct on the penis and opens independently. The uteri when empty lie lateral to the vasa deferentia but when distended overlap them. They open into a globular vesicle, which is posterior to the genital pore. Into it open the shell glands. The ovate lobules of the ovaries lie in two crescentic areas lateral to the pharynx, about 170 on each side.

Color reddish brown or, less often, gray; the dorsum finely maculate. A light band, about 0.8 mm wide in a worm 22 mm long, extends down the median line from the anterior tenth to the posterior fifth of the body. This is bordered for about 1.0 mm by a darker region where pigment flecks are thicker. The ventrum is brownish white, somewhat darker toward the margins; the pharynx and parts of the genitalia show as white bodies.

Type.—U.S.N.M. no. 20188, from St. Vincent Bar, Apalachicola Bay, Fla.; collected December 27, 1935, by George W. Wharton.

Remarks.—Specimens of this species have been taken from living oysters by Dr. H. F. Prytherch at Shell Point, Swanquarter, Pamlico Sound, N. C.; J. F. Bass, Bulls Bay, Charlotte County, Fla.; Albert Collier, Seabrook, Tex.; Prof. Clyde T. Reed, Matagorda Bay, Tex.; and by A. S. Pearse in Apalachicola Bay and in the region of Crooked Island Sound, St. Joe Bay, Tampa, Eau Gallie, Englewood, and Crystal River, Fla. In the National Museum collection are specimens from Plumpoint and Island Creek, Talbot County, Md.

This species is readily distinguished from *Eustylochus ellipticus* (Girard) by the position of the brain and the cerebral eyes behind or between the tentacles and by the absence of a reticulate color pattern.

Section SCHEMATOMMATA

Family LEPTOPLANIDAE

Genus NOTOPLANA Laidlaw

NOTOPLANA ATOMATA (O. F. Müller)

Polyscelis variabilis GIRARD, 1850, p. 251.

This species has been reported from Maine by Miss Hyman (1938) and was collected by the writer on the coast of Newfoundland during the summer of 1938.

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Genus LEPTOPLANA Ehrenberg

LEPTOPLANA ANGUSTA Verrill

Leptoplana angusta Verrill, 1893, p. 105.

An excellent specimen of this species is in the collection of the United States National Museum (no. 134562). Preserved and mount-

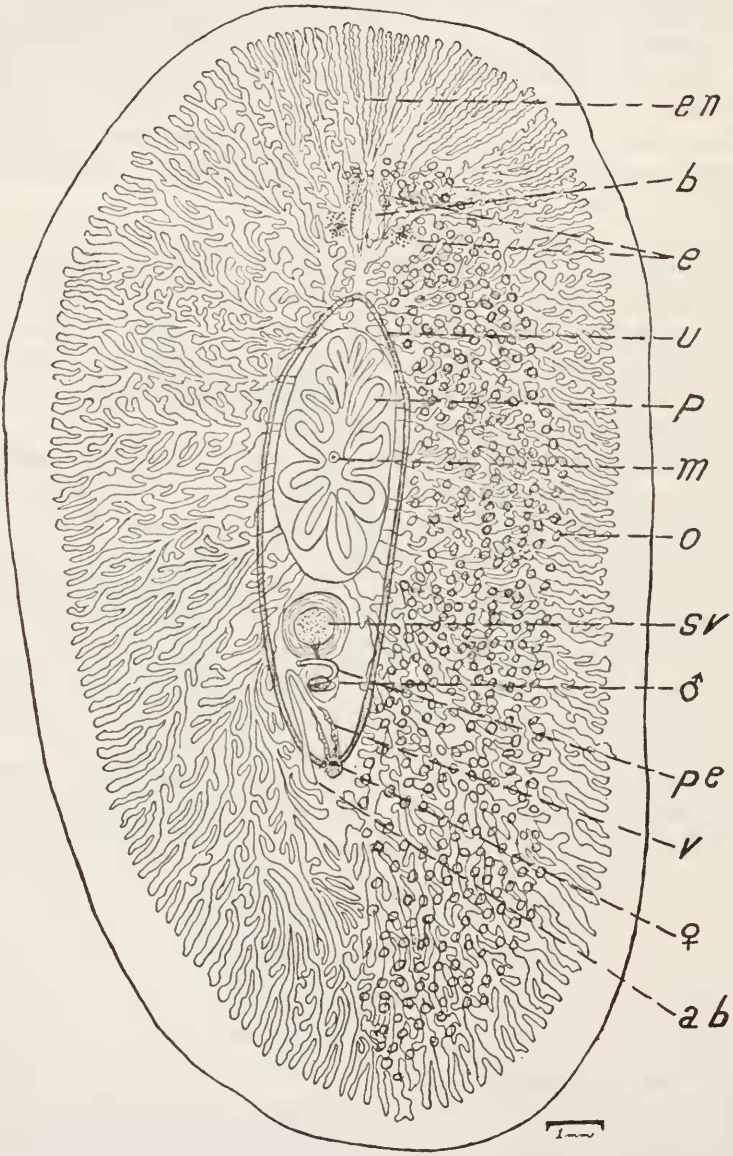

FIGURE 26.—*Leptoplana angusta* Verrill. *ab*, Accessory bladder; *b*, brain; *e*, eyes; *en*, enteron; *m*, mouth; *o*, ovary; *p*, pharynx; *pe*, penis; *sv*, seminal vesicle; *u*, uterus; *v*, vagina; ♂, male opening; ♀, female opening.

ed, it measured 22.5 by 12.7 mm. It was collected near Cobourg Island, Baffin Bay, August 13, 1935, by Capt. Robert A. Bartlett. A specimen found among ascidians on piles in St. Joe Bay, Fla., on March 28, 1936, measured 26 by 6 mm when alive and crawling; preserved and mounted, it measures 13.8 by 5.3 mm. Four other specimens were taken in this locality. I collected one specimen at Beaufort, N. C., during the summer of 1938.

Genus STYLOCHOPLANA Stimpson

STYLOCHOPLANA FLORIDANA, new species

FIGURE 27

Many specimens of this polyclad were collected; two on November 21, 1935, and others in February and March 1936 in old shells from Crooked Island Sound and St. Joe Bay, Fla. When alive these were active and moved about, often making quick jerks of their margins. When disturbed on the surface film they quickly darted to the bottom of the dish, like a wriggling fish. They had a delicate greenish tint. Many individuals appeared to be immature, as there were no eggs in the uteri, but in March some individuals laid eggs in the laboratory, and some of this group measured 8 by 3 mm when crawling and extended. Preserved, stained, and mounted the largest individual measures 6.4 mm long and 2.6 mm wide. The blunt, rounded anterior end in front of the brain is the widest part of the body; the posterior end tapers to a point. Various organs are the following distances from the anterior end: Brain, 1.3–1.6 mm; tentacles, 1.4–1.6 mm; pharynx, 2.0–3.5 mm; mouth, 3.1 mm; seminal vesicle, 3.6 mm; genital opening, 4.2 mm; accessory bladder at posterior end of vagina, 4.3 mm. The pharynx is narrow (0.6 mm) and arranged in about 10 folds on each side. The lateral enteric caeca do not appear to anastomose. There are five or six pairs, and a median anterior caecum. The gut of one of the specimens collected contains a small polychaete worm, and another had eaten the posterior portion of a copepod. An individual examined alive on February 10, 1936, spit out some encysted protozoans, which contained red pigment spots and looked like euglenoids. The tentacles are about 0.1 mm long and bear five or six eyes. Six eyes lie on each side anterior and lateral to the brain and five on each side between and posterior to the bases of the tenacles.

The globular seminal vesicle lies close to the posterior border of the pharynx. It connects with a long (0.3 mm) tube that bears prostate glands and leads to the penis, just anterior to the genital opening. The vasa deferentia are to be seen coiled on each side at the posterior end of the pharynx for a longitudinal distance of about 1.5 mm.

The vagina opens into a short shell gland and is connected by a sinuous course with a small, globular accessory vesicle. The uteri curve around the pharynx on each side from the vagina and unite in front of the pharynx.

Type.—U.S.N.M. no. 20190; from Crooked Island Sound, Farmdale, Fla.; collected November 21, 1935, by A. S. Pearse.

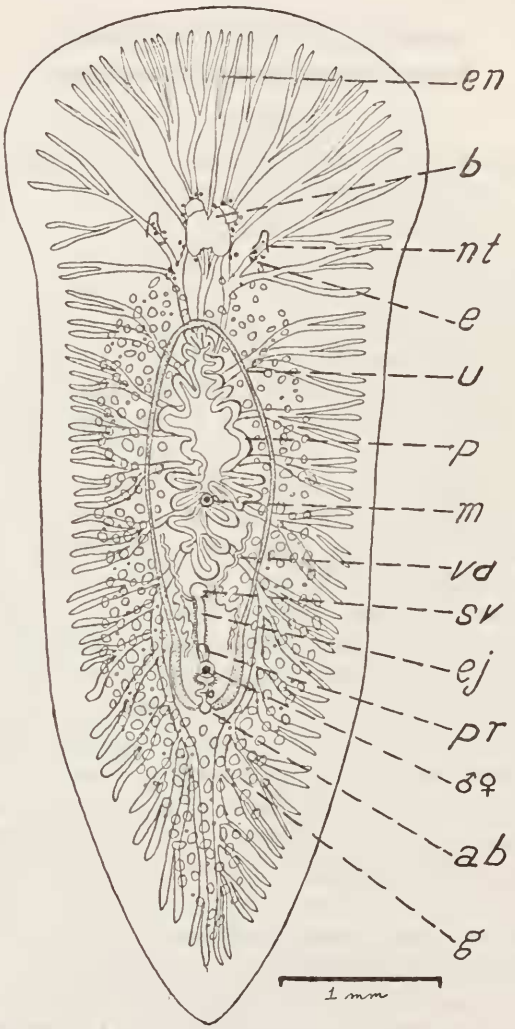

FIGURE 27.—*Stylochoplana floridana*, new species. *ab*, Accessory bladder; *b*, brain; *e*, eyes; *ej*, ejaculatory duct; *en*, enteron; *g*, gonads; *m*, mouth; *nt*, nuchal tentacles; *p*, pharynx; *pr*, prostate gland; *sv*, seminal vesicle; *u*, uterus; *vd*, vas deferens; ♂, male opening; ♀, female opening.

Genus HOPLOPLANA Laidlaw

HOPLOPLANA INQUILINA (Wheeler)

Planocera inquilina Wheeler, 1894, p. 196.

Several specimens were obtained from Woods Hole, Mass., and have been added to the National Museum collections. This polyclad lives in the shells of the large snail *Busycon.*

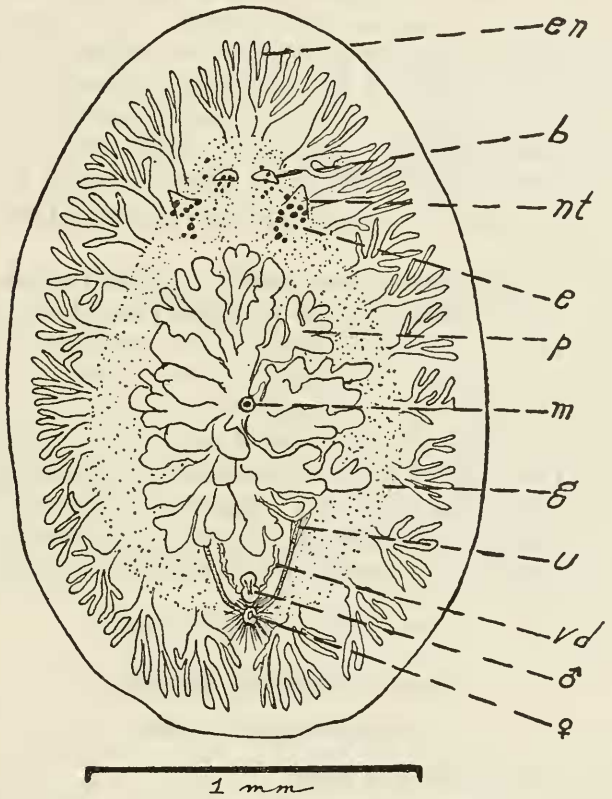

Figure 28.—*Hoploplana thaisana*, new species. *b*, Brain; *e*, eyes; *en*, enteron; *g*, gonads; *m*, mouth; *nt*, nuchal tubercles; *p*, pharynx; *u*, uterus; *vd*, vas deferens; ♂, male opening; ♀, female opening.

HOPLOPLANA THAISANA, new species

Figure 28

Body flat and short; in preserved specimens about two-thirds as wide as long (3.0 by 2.1; 2.4 by 1.5; 2.2 by 1.3, type; 1.6 by 1.3; 1.4 by 0.9; 1.0 by 0.7 mm). Tentacular eyes are almost one-third of length of body from anterior end. The number in six specimens (3.0–1.0 mm) was 36, 52, 26, 28, 40, 20. The number of cerebral eyes in the same animals was 22, 12, 10, 10, 6, 4. The tentacular eyes are usually

arranged more or less in a circle, or in an irregular circular group; not in horseshoe form with the opening directed posteriorly, as is usually the case in *H. inquilina* (Wheeler). The cerebral lobes are at the posterior end of the first quarter of the body.

The enteron has about 12 lateral branches on each side. These are subdivided and extend nearly to the margin of the body of all sides. The mouth is slightly anterior to the center of the body. The pharynx has about six irregular lobes on each side, and the basal trunks of these are comparatively smooth. The genital openings are in the median line about one-fifth of the length of the body from the posterior end. The one for the female system is about 0.1 mm behind that of the male. A pyriform seminal vesicle is present but no separate prostate gland. The penis is armed with a stylet.

Type.—U.S.N.M. no. 20189, from *Thais floridana* Conrad; collected at St. Vincent Bar, Apalachicola Bay, Fla., October 14, 1935, by A. S. Pearse.

Remarks.—This polyclad was usually found on the sides of dishes in which crushed *Thais floridana floridana* Conrad were allowed to stand, but it was once taken from the sides of pails in which oyster shells were standing and once from a dish of barnacles. All specimens examined came from Apalachicola Bay, Fla. These have been compared with specimens of *Hoploplana inquilina* (Wheeler) that came from the shells of *Busycon canaliculatum* Linnaeus at Woods Hole, Mass. The present species differs from the specimens of that in Massachusetts in its smaller size, in the arrangement and number of the eyes, and in the character of the lateral pharyngeal lobes.

Family PLANOCERIDAE

Genus PLANOCERA Blainville

PLANOCERA NEBULOSA Girard

Planocera nebulosa GIRARD, 1854, p. 367.

The only specimens in the collection of the National Museum carrying this species designation are two determined by the late A. E. Verrill. These specimens properly belong to the genus *Eustylochus*, where I have also referred to them (p. 73). As a matter of record and for convenience, I have included Girard's species in the key to the polyclads of our eastern seaboard, p. 96.

Family STYLOCHOCESTIDAE

CONJUGUTERUS, new genus

Body elongated; at least six times as long as wide when extended; without marginal eyes, tentacles, or tentacular eye groups; pharynx

slightly frilled, in anterior half of body; enteron anastomosed in posterior half; uteri united posteriorly; male and female genital apertures separate, at about the posterior end of the middle body fifth.

Type.—Conjuguterus parvus, new species.

CONJUGUTERUS PARVUS, new species

FIGURE 29

Body at least six times as long as wide. The type, examined alive on March 11, 1935, was 5.2 mm long and 0.8 mm wide when extended and crawling; preserved, it measures 1.93 by 0.94 mm; two other preserved specimens measure 2.9 by 1.0 mm and 3.3 by 1.1 mm. A specimen that laid 150 eggs in a dish in the laboratory on January 30, 1936, measures 1.5 by 0.6 mm preserved. A large specimen collected on March 24, 1936, measured 10.3 by 1.9 mm when alive and extended. In the preserved type, structures along the median line measure the following distances from the anterior end: Eyes 0.24–0.38 mm; brain, 0.27–0.38 mm; pharynx, 0.39–0.82 mm; mouth, 0.58 mm; uteri, 0.55–1.23 mm; vasa deferentia, 0.54–1.06 mm; male genital aperture, 1.1 mm; female genital aperture, 1.3 mm. The eyes are arranged in four pairs of groups lateral to the brain, which consists of two elliptical lobes. The mouth, one-third of the body length from the anterior end, is about in the center of the pharynx. There are about 12 pairs of bifid enteric caeca lateral to the pharynx and uteri; behind the transverse connecting loop of the uterus there are about 12 more pairs; about five caeca extend forward dorsal to the eyes and brain. Behind the uterus the enteron consists, besides the marginal caeca, of a median and two lateral trunks, which are connected by about six transverse canals.

The male genital system is directed backward. The small penis is armed with a curved stylet. A pyriform seminal vesicle connects with it as its base and also with a slightly smaller pyriform prostate gland. The vasa deferentia unite anterior to the seminal vesicle; they extend forward on either side of the pharynx to form a V. The pyriform vagina is surrounded by the follicles of shell gland. The uteri lie lateral and dorsal to the vasa deferentia. They are swollen and somewhat twisted in gravid individuals; a transverse loop connects them posterior to the vagina; they taper anteriorly and may be traced forward to about the middle of the pharynx. The body is unpigmented on the ventral side but the dorsum has small gray-brown specks; the enteron and other organs are visible through the integument; hence most specimens appear to be a delicate light brown.

Type.—U.S.N.M. no. 20197, from St. Joe Bay, Fla.; collected March 11, 1936, by A. S. Pearse.

Remarks.—Other specimens were collected in Florida from Apalachicola Bay, March 16, 1936; Crystal River, October 3, 1935; Eau Gallie, January 16, 1936; St. Joe Bay, March 24, 1936. The worms were always found among old shells. During the summer of 1938, one specimen was taken at Beaufort, N. C.; and several were collected at Ellerslie, Prince Edward Island, Canada.

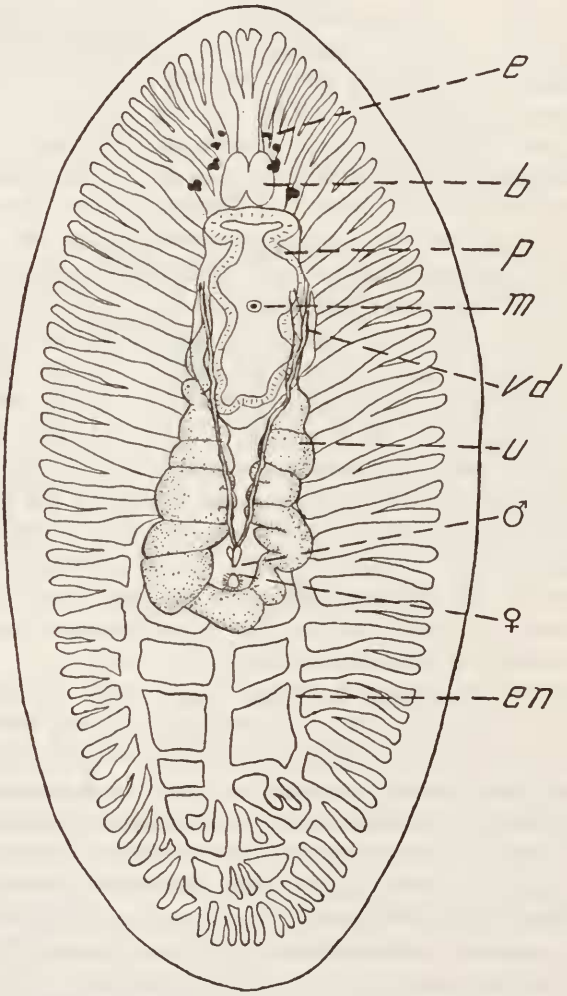

FIGURE 29.—*Conjuguterus parvus*, new genus and species. *b*, Brain; *e*, eyes; *en*, enteron; *m*, mouth; *p*, pharynx; *u*, uterus; *vd*, vas deferens; ♂, male opening; ♀, female opening.

Section EMPROSTHOMMATA

Family CESTOPLANIDAE

OCULOPLANA, new genus

Similar to *Cestoplana*, but with marginal eyes completely around the body. The brain is far back, at least a fifth of the length of the body from the anterior end. A branch of the gut extends forward in the median line dorsal to and between the lateral lobes of the brain to the anterior margin of the body.

OCULOPLANA WHARTONI, new species

FIGURE 30

Body long and slender; in living specimens at least eight times as long as wide when crawling (8 by 1 mm), often longer when extended. In three well-preserved specimens the body is five times as long as wide (11 by 2.1; 8.9 by 1.7; 8.3 by 2 mm, type). The body is blunt and rounded at both ends; the sides are parallel, and the margins are so thin and mobile that they curl readily. At the posterior end there is a weak, poorly defined adhesive organ.

The enteron extends throughout the body. From the median stem about 95 branched lateral twigs and a dozen short blind pouches extend on each side. The median stem extends forward and branches along the anterior margin. The mouth is situated at the anterior end of the posterior fifth of the body. The pharynx at rest is about 0.75 mm long and 0.35 mm wide; two-thirds of it lies behind the mouth.

The brain is in the anterior end of the second fifth of the body. Its total width is about 0.35 mm; the two lateral lobes are 0.1 mm apart. The single female genital aperture is about one-ninth of the length of the body from the posterior end, and the male aperture is about 0.1 mm anterior to it and close to the pharynx. The vasa deferentia and the uteri are to be seen extending forward through a third of the length of the body. Both lie nearly parallel to the median line; the former lie lateral to the latter and are more or less twisted. The penis is unarmed. A pyriform prostate gland is distinct from the siminal vesicle. About 50 small testes lie on either side of the body through about the middle fifth.

Living animals are pale yellowish white, without pigment; the yellowish enteron shows clearly through the integument; some individuals have a delicate pinkish tint.

Type.—U.S.N.M. no. 20195, from St. Vincent Bar, Apalachicola Bay, Fla.; collected August 16, 1935, by George W. Wharton.

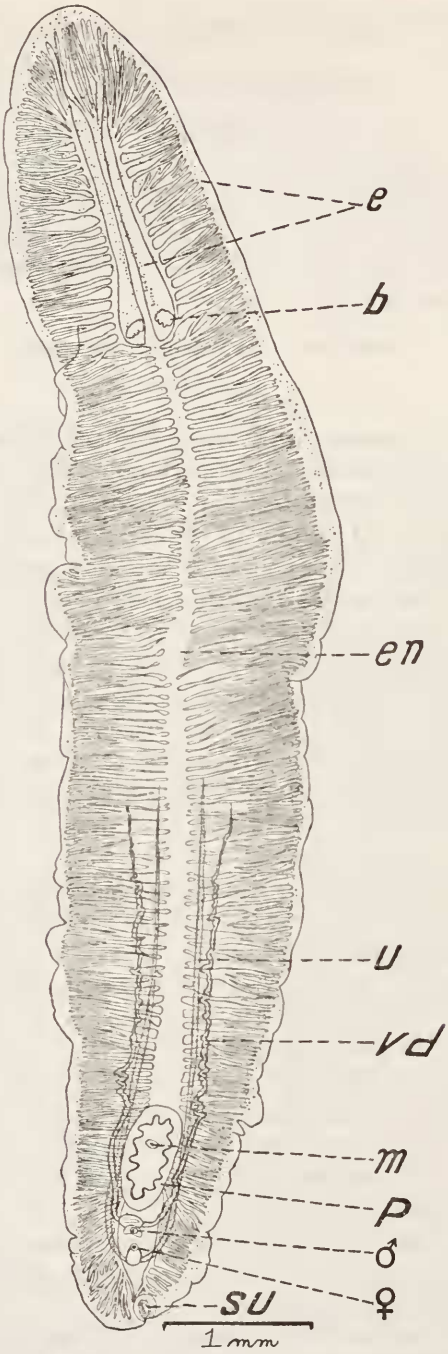

FIGURE 30.—*Oculoplana wchartoni*, new genus and species. *b*, Brain; *e*, eyes; *en*, enteron; *m*, mouth; *p*, pharynx; *u*, uterus; *vd*, vas deferens; ♂, male opening; ♀, female opening.

Remarks.—Specimens have been collected in Apalachicola Bay and near Crystal River, Florida, on shells from oyster bars; June 15 to October 15, 1935. During the summer of 1938 several specimens were taken at Beaufort, N. C.

Suborder COTYLEA

Family PSEUDOCERIDAE

Genus THYSANOZOON Grube

THYSANOZOON BROCCHI (Risso)

Tergipes brochi Risso, 1818, p. 373.
Thysanozoon brocchi Grube, 1840, p. 55.

Four specimens of this papillate polyclad were found among eelgrass at Crooked Island Sound west of Farmdale, Fla., November 21, 1935. When alive and extended they measured 33 by 10, 31 by 10.5, 28 by 12, and 28 by 8 mm. They swam about actively by waving the sides of their bodies. The colors of the four individuals varied somewhat. In one the dorsal papillae were light brown; between them the body was cream color, with a light yellow reticulum, and minute flecks of black pigment grouped so as to form spots; a dark median streak had a light irregular stripe running through it; the region over the brain was unpigmented, but an area about it and extending up onto the marginal tentacles was nearly black. The ventrum was buff, with a median light streak. Two specimens had purplish-brown papillae near the median line, and the color became light brown toward the sides; some of the papillae had white spots and dark tips; there was a white T-shaped area between the purplish marginal tentacles; along the margin there was a brown and purple reticulum, with a tendency to the formation of radial bands. The ventrum was cream color and darker toward the sides. The fourth specimen was intermediate in color between the brown and purple individuals. On February 10, 1936, 11 more specimens of this species were collected in Crooked Island Sound, Fla. They were similar to those previously observed. On March 25 and 26, 1936, 14 specimens were collected in St. Joe Bay, Fla. Some of these laid eggs in dishes in the laboratory.

Genus PSEUDOCEROS Lang

PSEUDOCEROS MACULOSUS, new species

FIGURE 31

The following description is of a single specimen that was first examined alive and later preserved, stained, and mounted. In the

living animal the body was extremely flat; length, 17 mm; width, 7 mm. Tentacles: Length, 1 mm; width, 0.7 mm. Color gray, with a median light dorsal band and a dark border about this, about 135 small dark spots scattered irregularly but evenly over the dorsal surface; ventrum lighter than dorsum but similarly colored, immaculate. The dorsum was roughened by small, low, conical papillae, which were more numerous toward the median line; still smaller papillae occurred between these. The tentacles were folds in the anterior margin and had rounded distal ends. The enteron was reticulate and showed clearly. The animal swam about by waving its margins but was not so good a swimmer as *Thysanozoon*.

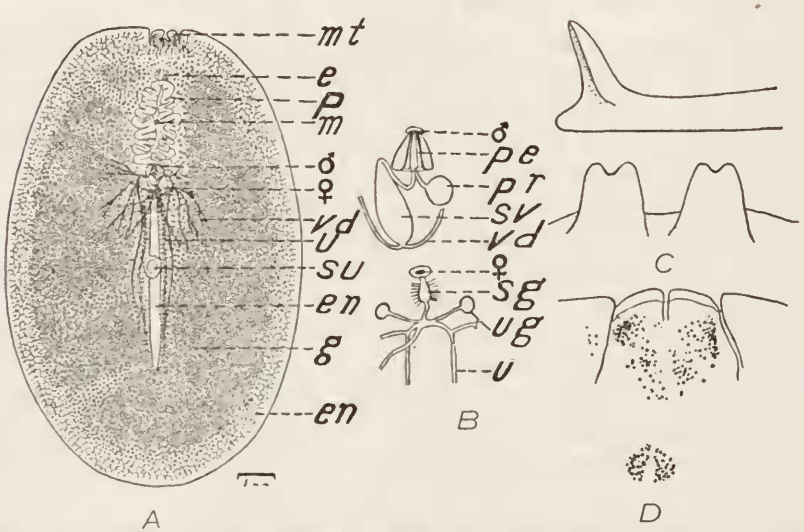

FIGURE 31.—*Pseudoceros maculosus*, new species: *A*, Ventral view of body; *B*, terminal portions of male and female genitalia; *C*, marginal tentacles, lateral and dorsal views; *D*, distribution of tentacular and cerebral eyes. *e*, Eyes; *en*, enteron; *g*, gonads; *m*, mouth; *mt*, marginal tentacles; *p*, pharynx; *pe*, penis; *pr*, prostate gland; *sg*, shell gland; *su*, sucker; *sv*, seminal vesicle; *u*, uterus; *ug*, uterine glands; *vd*, vas deferens; ♂, male opening; ♀, female opening.

Preserved, the body is 13.1 mm long and 8 mm wide. The lobate pharynx is 1.3 mm from the anterior end, 2.7 mm long, and 1.5 mm wide; it has about seven folds on each side. The following figures indicate the distance of various median structures from the anterior end: Mouth, 1.7 mm; male genital opening, 4.2 mm; female genital opening, 4.8 mm; ventral sucker, 7.9 mm; end of median stem of enteron, 9.8 mm. There is a clear margin about 0.4 mm wide in which the reproductive organs are absent, and the branches of the enteron are therefore clearly visible all around the margin of the body. The ventral sucker is 0.6 mm in diameter; the muscular

border around it is 0.15 mm wide, and the aperture is 0.3 mm wide; the margin is wavy. The lateral canals of the enteron are reticulate, and about 42 pairs of lateral branches enter the median stem posterior to the pharynx. Small enteric twigs extend close to the margin of the body everywhere, and some are distributed to the tentacles.

The tentacles are blunt and flat. When extended in a living animal they have vertical grooves on their anterior surfaces. The eyes are arranged in two pairs of lateral groups. An elongated group of about 60 are found within and at the base of each tentacle. The two crescentic cerebral groups each contain 28 eyes. These lie anterior to the pharynx.

The male genital opening is at the posterior border of the pharynx. A conical penis, surrounded by a sheath, lies just inside it. This is connected by ducts with a spherical prostate gland and a long, pyriform seminal vesicle, which extends posteriorly to the female genital opening. The vasa deferentia enter the posterior end of the vesicle from each side. They have four branches on each side. These connect with the numerous testes, which lie in the lateral areas and extend across the body posterior to the median enteric stem. The female genital opening leads into an antrum and a shell gland. Posterior to this is a short slender duct that divides into two branches on the left side and three on the right. The anterior branches on each side lead to small uterine glands; the other branches extend posteriorly on each side of the body. The numerous ovaries are interspersed with the testes in the lateral and posterior areas.

Type.—U.S.N.M. no. 20191, from Crooked Island Sound, Farmdale, Fla., collected November 21, 1935, by A. S. Pearse.

Remarks.—This species is distinguished from others in the genus *Pseudoceros* by its maculate, papillate dorsum and the arrangement of the female genital ducts.

Family EURYLEPTIDAE

Genus EURYLEPTA Ehrenberg

EURYLEPTA MACULOSA Verrill

Eurylepta maculosa Verrill, 1893, p. 495.

Verrill's type and two cotypes are in the National Museum, but they are poorly preserved and, even stained and mounted, show very little.

OLIGOCLADO, new genus

Like *Oligocladus* Lang, 1884, but the mouth is not in front of the brain and the male genital aperture is near the posterior margin of the pharynx. The body is flat and elliptical. There is a pair of

slender conical tentacles at the anterior end, with eyes between the bases and in the basal halves of the tentacles. Two groups of cerebral eyes lie on each side and connect across the anterior margin of the brain. The median stem of the enteron connects with three pairs of lateral branches. At its posterior end there is an anus. The uteri lie lateral to the median enteron, and outside (lateral to) them are two slender ducts, which connect a glandular organ at the anterior end of the uteri with the anus. Lateral to these ducts are the coiled vasa deferentia, which fuse behind the anus and extend beyond as a short loop.

Type.—Oligoclado floridanus, new species.

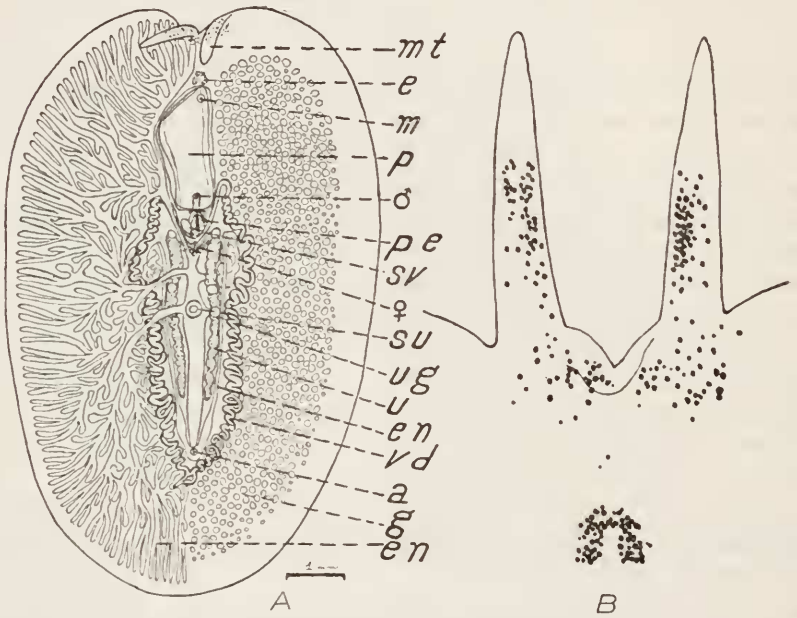

FIGURE 32.—*Oligoclado floridanus*, new genus and species: *A*, Ventral view, enteron on left, gonads on right; *B*, anterior end showing eyes and tentacles. *a*, Anus; *e*, eyes; *en*, enteron; *g*, gonads; *m*, mouth; *mt*, marginal tentacle; *p*, pharynx, *pe*, penis; *su*, sucker; *sv*, seminal vesicle; *u*, uterus; *ug*, uterine gland; *vd*, vas deferens; ♂, male opening; ♀, female opening.

OLIGOCLADO FLORIDANUS, new species

FIGURE 32

A single specimen was collected. When alive and crawling and extended it measured 18 mm long and 8 mm wide. The tentacles at the anterior end were slender and acute and bore eyes in their proximal half. The color of the dorsum was brown, with a purplish me-

dian band and a cream-colored margin. The brown color appeared to be due largely to the enteron. The ventrum was light brown, with a light band through the middle two-thirds of the body, probably due to the genitalia.

The specimen preserved, stained, and mounted is 12.8 mm long and 8.0 mm wide. Organs in the median line are the following distances from the anterior end: Brain, 1.5 mm; pharynx, 1.75–4.4 mm; mouth, 2.0 mm; male genital opening, 4.2 mm; female genital opening, 5.2 mm; ventral sucker, 6.7 mm; median enteric stem, 5.5–9.9 mm; anus, 9.8 mm. The tentacles are 1.3 mm long, slender, and tapering. About 80 eyes are at and between their bases; about 50 eyes occupy the proximal half of each tentacle; about 70 cerebral eyes are arranged in the form of a horseshoe, with the opening posterior.

The tubular pharynx lies immediately behind the brain. From it the median enteric stem extends to the anus. Three pairs of lateral, branched caeca leave the stem in its anterior half and extend to all margins of the body. On each side of the anus two tubes extend forward to the anterior ends of the uteri and there connect with the anterior ends of what appear to be two lateral glandular organs, which measure about 1.3 by 0.4 mm.

The male genital system opens on the ventral side of the body at the anterior margin of the posterior ninth of the pharynx. A conical antrum leads to a slender penis, which bears a spine and is enclosed in a sheath. Connected with the penis are two organs: A small spherical prostate gland and an elongated, pyriform seminal vesicle. The vasa deferentia extend forward on either side of the pharynx for a short distance and then coil backward and fuse behind the anus. They extend posteriorly beyond their point of fusion to form a small loop and a blind appendage. Numerous small testes are distributed all round the body, except for a band (0.75 mm wide) about the margin and in the median space occupied by enteric and genital organs. The slightly larger ovaries have about the same distribution. The cylindrical uteri extend longitudinally on each side of the median enteric stem; length, 3.7 mm; width, 0.3 mm. The ventral sucker is between their middles. There appear to be three pairs of globular uterine glands on their anterior halves. Two ducts lead from their anterior ends to the shell gland and the ventral genital pore.

Type.—U.S.N.M. no. 20192, from Crooked Island Sound, Farmdale, Fla.; collected November 21, 1935, by A. S. Pearse.

During the summer of 1938 several specimens of this species were found at Beaufort, N. C.

Genus ACEROTISA Strand

ACEROTISA PELLUCIDA, new species

FIGURE 33

Body flat, delicate and elliptical in outline; size of two preserved specimens: 7.1 by 4.3; 5.7 by 3.8 mm. The median ventral sucker is at the posterior end of the anterior third of the body; diameter, 0.2 mm. The cerebral eyes in the two specimens number 34 and 24, respectively. They are arranged in two irregular, elongated groups anterior and posterior to the brain lobes on each side. There are about 12 small eyes along the anterior margin; two near the median line; three lateral to these in a longitudinal series; and two farther toward the sides. The brain lies at the posterior end of the anterior ninth of the body. A reticulate nervous system is easily seen all around the margin and is especially clear at the anterior end. The mouth is immediately behind the brain, about 1.0 mm from the anterior end. The pharynx is tubular, 0.7 mm long and 0.5 mm wide.

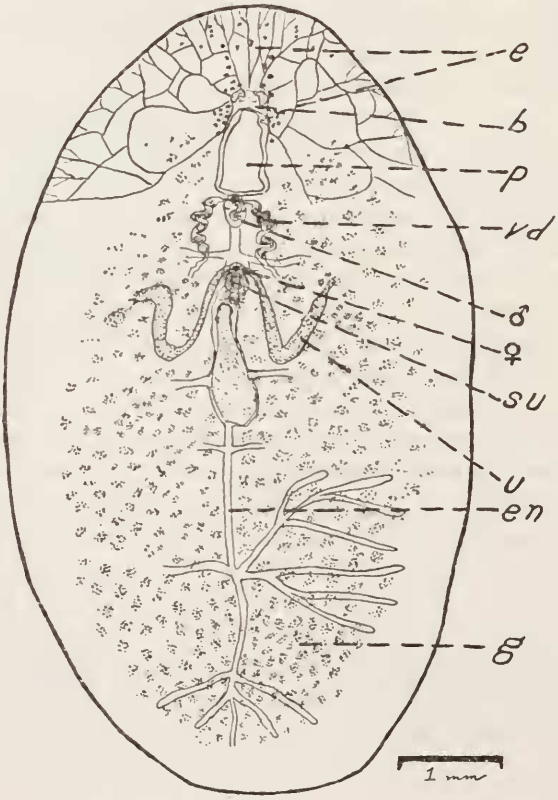

FIGURE 33.—*Acerotisa pellucida*, new species: Dorsal view. *b*, Brain; *e*, eyes; *en*, enteron; *g*, gonads; *p*, pharynx; *su*, sucker; *u*, uterus; *vd*, vas deferens; ♂, male opening; ♀, female opening.

The median stem of the enteron is readily seen extending from the pharynx to near the posterior end of the body, but the twigs of the four pairs of lateral branches cannot be made out well in the preserved specimens available.

The male genital aperture is close to the posterior margin of the pharynx. The coiled vasa deferentia enter the male bursa near its anterior end and may be seen to extend posteriorly about 0.8 mm on either side. Oval testes about 0.05 mm long are scattered evenly through the interior of the body from the pharynx posteriorly, except in a zone about 0.5 mm wide about the margin. A prostate gland is separate from the seminal vesicle. The female genital pore is about 0.6 mm posterior to that of the male system. It is connected with two uteri, which bend posteriorly and then anteriorly.

Type.—U.S.N.M. no. 20193, from St. Vincent Bar, Apalachicola Bay, Fla.; collected June 25, 1935, by A. S. Pearse.

Remarks.—Only two specimens of this species were collected. These were pale, pellucid and had no pigment or distinctive color, the body appearing whitish.

Family PROSTHIOSTOMIDAE

Genus PROSTHIOSTOMUM Quatrefages

PROSTHIOSTOMUM LOBATUM, new species

FIGURE 34

Body of living specimen slender; head rounded and wider than body, which tapers toward the pointed posterior end; three specimens studied alive on December 2, 1935, measured 17 by 2.7, 11 by 2.3, and 7 by 1 mm. Three preserved specimens show the following distances (in millimeters) from the anterior end to various organs and openings:

Size	Brain	Mouth	Male opening	Female opening	Sucker
10.8 by 3.5	1.1	1.7	5.1	5.6	6.4
5.9 by 1.8	0.3	1.3	3.6	3.8	4.1
5.3 by 1.8	0.3	0.4	2.7	2.9	3.3

The last line shows that when the body is strongly contracted the mouth may be brought in close proximity with the brain. The sucker is often lobate in contracted specimens, as the figure shows. This feature is used to give the specific name to the species.

The eyes number about 106 in adult worms, but younger specimens have been examined with 4, 12, 20, 22, 28, 40, 58, and 70. In three favorable large specimens the number of eyes is as follows:

Size	Cerebral	Intermediate	Marginal	Total
Mm				
10.8 by 3.5	35	0	70	105
5.9 by 1.8	34	2	70	106
5.3 by 1.8	17	2	51	70

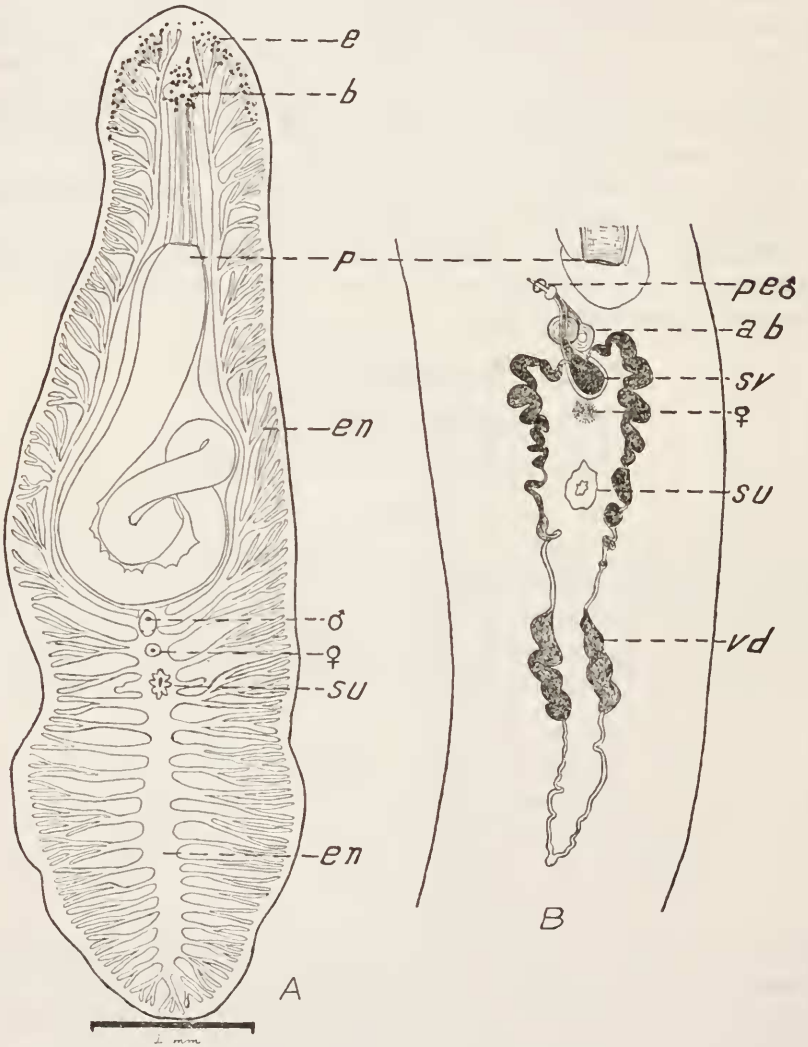

FIGURE 34.—*Prothiostomum lobatum*, new species: *A*, Ventral view of body; *B*, ventral view of middle of body. *ab*, Accessory bladder; *b*, brain; *c*, eyes; *en*, enteron; *p*, pharynx; *pe*, penis; *su*, sucker; *sv*, seminal vesicle; *vd*, vas deferens; ♂, male opening; ♀, female opening.

There are no marginal eyes at the anterior end for a space of about 0.15 mm wide; on each side of this a group of about 35 eyes extends along the margin, about two-thirds of the eyes being anterior to the brain. The cerebral eyes are usually arranged in the form of a horseshoe or a V, with the opening directed posteriorly. They lie dorsal to the brain and extend in front of and behind it.

The enteron consists of a median stem and about 22 lateral branches on each side. The twigs of these extend to near the margin throughout the body. The pharynx is often coiled within its sheath or may even be thrown out of the body in preserved specimens, but in living worms it rests longitudinally and in moving specimens is indicated by a median ridge near the anterior end. In it longitudinal muscles lie within the circular muscles.

About 300 small rounded testes may be seen interspersed among the lateral twigs of the enteron. They extend forward on either side to just posterior to the brain. The male genital pore lies immediately behind the pharynx. Two vasa deferentia enter the genital bursa near the posterior end from the sides and bend sharply to extend backward at right angles along each side of the median stem of the enteron. The female genital opening is close behind the male opening about 0.2 to 0.3 mm distant. The uteri coil along the sides and extend almost to the posterior end of the body. The ovaries are diffuse lobate structures on either side of the median enteric stem forward as far as the anterior third of the pharynx. The genital organs do not occur along the margins of the body; a zone about 0.3 mm wide is thus left free.

Color, unpigmented except for the eyes. Living specimens are cream color or dirty white, and darker yellowish-brown toward the median line because the internal organs show through the integument.

Type.—U.S.N.M. no. 20194; from St. Vincent Bar, Apalachicola Bay, Fla.; collected August 16, 1935, by A. S. Pearse.

Remarks.—This species was not uncommon in Apalachicola Bay during 1935–36. It was usually found at the surface of pails of shells that had been brought in from the oyster bars and allowed to stand. Several large specimens were collected in St. Joe Bay, Fla., March 24, 25, 1936. Some of them laid eggs in the laboratory. The two largest measured 22 by 3 and 24 by 3.3 mm when extended and crawling A young specimen was collected near Crystal River, Fla., on October 3, 1935. During the summer of 1938 specimens were collected at Beaufort, N. C. The species differs from *Prosthiostomum gracile* Girard, 1850, in its larger size and in the arrangement of the eyes.

KEY TO POLYCLADS REPORTED FROM THE EASTERN COAST OF NORTH AMERICA

1 (40). Without ventral sucker or marginal tentacles--- suborder **Acotylea, 2**

2 (21). With marginal eyes; male genital organs directed posteriorly, no cirrus; nuchal tentacles present or absent; uteri never fuse anterior to pharynx---- section **Craspedommata, 3**

3 (6). Nuchal tentacles absent (or rudimentary); pharynx long, central, frilled; 1 or 2 genital openings close to pharynx, and not near posterior end; large muscular penis; no vagina bulbosa---------- family **Discocelidae, 4**

4 (5). Color gray, with radiating light streaks and a lighter median band; cerebral and tentacular eyes in 2 pairs of groups; Florida, North Carolina----Discocelis grisea, new species

5 (4). Color yellowish brown, with or without darker median band; cerebral and tentacular eyes tend to form 3 pairs of groups; Connecticut, Massachusetts.
Discocelis mutabilis (Verrill, 1873)

6 (3). Nuchal tentacles present---------- 7

7 (10). With 3 genital openings; penis unarmed and without sheath; nervous system reddish in life------ family **Latocestidae, 8**

8 (9). Size large, 20–25 mm by 10–15 mm; color yellowish, pale over pharynx; Rhode Island, Massachusetts.
Trigonoporus folium (Verrill, 1873)

9 (8). Size small, 12–15 mm by 6–8 mm; color yellowish or pinkish; Cape Cod, 25 fathoms-- **Trigonoporus dendriticus Verrill, 1893**

10 (7). With 2 genital openings; body broad or slender oval, firm; eyes around all or part of margin; tentacular and cerebral eye groups present but sometimes diffuse; nuchal tentacles large, small (or absent in non-American species); pharynx central and frilled; male genital system directed posteriorly; prostate gland, separate; ejaculatory duct opens into prostate duct or separately; no vagina bulbosa---------- family **Stylochidae**
Female genital opening near posterior end and near that of male; female system without Lang's vesicle, genitointestinal vesicle, or vaginal duct; nuchal tentacles present---------- subfamily **Stylochinae, 11**

11 (12). With 2 clearly separate genital openings at least a seventh of body length from posterior end---------- genus **Stylochus, 13**

12 (11). With genital openings very close together and less than a twentieth of body length from posterior end.
genus **Eustylochus, 19**

13 (14). Body when extended 30–40 mm long and 10–12 mm wide, rounded at ends; pharynx mostly anterior to middle, mouth at end of anterior third; color yellowish brown, with numerous transverse light stripes, sometimes with a light median band; usually in *Busycon* shells; New England, North Carolina----------Stylochus zebra Verrill, 1882

14 (13). Body when extended not more than three times as long as wide; mouth and pharynx near middle; not transversely striped---------- 15

15 (16). Color yellowish gray, with brown spots at margin; tentacles small obtuse; pharynx with 5 pairs of lateral branches; Massachusetts, [? South Carolina].
Stylochus frontalis Verrill, 1893

16 (15). Color pink or gray; tentacles acute; pharynx with more than 5 pairs of lateral branches---------- 17

17 (18). Body large, 53 by 27 mm; color pink with small oval flecks on a creamy background; Apalachicola Bay, Fla.
Stylochus floridanus, new species

18 (17). Body usually of medium size, 48 by 28 mm; color gray; east and west coasts of Florida-- Stylochus inimicus Palombi, 1931

19 (20). Body slender, 20 by 6 mm; brain and cerebral eyes in front of nuchal tentacles; color yellowish brown or reddish, pattern reticulate; New England.
Eustylochus ellipticus (Girard, 1850)

20 (19). Body little more than twice as long as wide when extended, 24 by 11 mm; brain and cerebral eyes behind and between nuchal tentacles; color reddish or sometimes gray, pattern not reticulate; Maryland to Texas.
Eustylochus meridianalis, new species

21 (2). Without marginal eyes, or with body ribbonlike and eyes around whole margin; body more or less delicate---------- 22

22 (39). No marginal eyes, and eyes that are present far from front; male genitalia directed posteriorly; body not ribbonlike---------- section Schematommata, 23

23 (36). Body somewhat elongated; without or with nuchal tentacles; prostate gland separate when present; penis with or without stylet; *uteri united anterior to pharynx.*
family Leptoplanidae, 26

24 (29). No tentacles; body elongated, elliptical in outline; margin more or less folded---------- genus Leptoplana, 25

25 (26). With about 12 pairs of lateral pharyngeal lobes; color light brown with darker median streak; length 12–16 mm by 4–6 mm; Massachusetts, Baffin Bay, North Carolina, Florida----------Leptoplana angusta Verrill, 1893

26 (25). With 6 or fewer paired pharyngeal lobes---------- 27

27 (28). Mouth anterior to middle of pharynx; color pale brown, with darker flecks; size 18 by 10 mm; Cape Cod, 13.5 to 31 fathoms---------- Leptoplana virilis Verrill, 1893

28 (27). Mouth about in middle of pharynx; color variable, yellowish brown, salmon, greenish; Massachusetts, Maine, Newfoundland; 0 to 42 fathoms.
genus Notoplana, N. atomata (O. F. Müller, 1776)

29 (24). With nuchal tentacles---------- 30

30 (33). Body elliptical with rather pointed ends; in gastropods.
genus Hoploplana, 31

31 (32). Lateral pouches of pharynx with smooth basal trunks; cerebral eyes usually arranged in an irregular circle; size 3.0 by 2.1 mm; in *Thais;* Florida.
Hoploplana thaisana, new species

32 (31). Lateral pouches of pharynx saccate to base; cerebral eyes usually arranged in shape of a horseshoe with a posterolateral opening; size 6 by 4 mm; in *Busycon;* Massachusetts---------- Hoploplana inquilina (Wheeler, 1894)

33 (30). Anterior end of body wide, tapering to a point posteriorly; very active, often swimming_____ genus **Stylochoplana**, 34

34 (36). Color bright red, with light margins on which are pale yellow spots; size, 38 by 6 mm; Massachusetts.

Stylochoplana oculifera (Girard, 1854)

35 (35). Unpigmented with a delicate greenish tint; size 8 by 3 mm; Florida, North Carolina.

Stylochoplana floridana, new species

36 (23). Uteri not united anterior to pharynx_____ 38

37 (38). Body when extended six times as long as wide; mouth and pharynx in anterior half of body; Florida, North Carolina, Prince Edward Island.

family **Stylochocestidae, Conjuguterus parvus**, new genus and species.

38 (37). Body round-oval; with prostate gland separate from vesicular duct; genital pores not close to posterior end; mouth and pharynx central_____ family **Planoceridae**

Body 29 by 10 mm; color olive-green, with median dorsal stripes; South Carolina to Massachusetts.

Planocera nebulosa Girard, 1854

39 (22) With or without marginal eyes[2]; body ribbonlike, delicate; pharynx and male genitalia near posterior end and the latter directed forward_____ section **Emprosthommata**

No nuchal tentacles; eyes in genus *Cestoplana* do not occur on margin, but in the present new genus *Oculoplana* they completely surround the body; Florida, North Carolina.

family **Cestoplanidae, Oculoplana whartoni**, new genus and species

40 (1). With a sucker behind the genital pores; often with marginal tentacles; pharynx frilled, folded, or tubular.

suborder **Cotylea**, 41

41 (44). Usually large, often brightly colored, oval, rough or smooth; with foldlike marginal tentacles; mouth in middle of front half of body; pharynx folded; enteron reticulate; sucker in middle of body; vasa deferentia and uteri branched; eyes in double cerebral groups and anterior and posterior to tentacles_____ family **Pseudoceridae**, 42

42 (43). Dorsum covered with long fingerlike papillae; Florida.

Thysanozoon brocchi (Risso, 1818)

43 (42). Dorsum not covered with long papillae; Florida.

Pseudoceros maculosus, new species

44 (41). Marginal tentacles if present not foldlike, but slender and conical or absent; pharynx tubular_____ 45

45 (50). Body oval or elliptical in shape_____ family **Euryleptidae**, 46

46 (47). Without anterior tentacles; enteric caeca few and little branched; Florida_____ **Acerotisa pellucida**, new species

47 (46). With 2 slender anterior marginal tentacles_____ 48

48 (49). Median stem of enteron with anus at posterior end; body 18 by 8 mm; brown, with median purplish band; Florida, North Carolina.

Oligoclado floridanus, new genus and species

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[2] The presence of eyes around the entire body in the genus *Oculoplana* makes a revision of Bresslau's Emprosthommata necessary.

49 (48). Without anus; 15 by 10 mm; yellow, with brown spots; New England---------- Eurylepta maculosa Verrill, 1893

50 (45). Body elongated, ribbonlike, and delicate; without tentacles; eyes along anterior margin and over brain; pharynx tubular; mouth behind brain_ family Prosthiostomidae, 51

51 (52). Body 4 by 1.25 mm; marginal eyes continuous across front; tentacular, cerebral, and frontal eyes in 4 groups; New England---------- Prosthiostomum gracile Girard, 1850

52 (51) Body 17 by 2.7 mm; eyes in 2 lateral marginal groups; with a space between them at anterior end, and an irregular cerebral group; Florida.

Prosthiostomum lobatum, new species

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